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SENATE

REPORT
98-451

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION OCEAN AND COASTAL PROGRAM AUTHORIZATION ACT

MAY 16 (legislative day, MAY 14), 1984.—Ordered to be printed

Mr. PACKWOOD, from the Committee on Commerce, Science, and Transportation, submitted the following

REPORT

[To accompany S. 2538]

The Committee on Commerce, Science, and Transportation, to which was referred the bill (S. 2538) to consolidate and authorize certain ocean and coastal programs and functions of the National Oceanic and Atomospheric Administration under the Department of Commerce, and for other purposes, having considered the same, reports favorably thereon with amendments and recommends that the bill do pass.

PURPOSE OF BILL

The purpose of this bill is to authorize appropriations for several ocean and coastal programs of the National Oceanic and Atmospheric Administration (NOAA) for fiscal year 1985, and to authorize appropriations for the Deep Seabed Hard Mineral Resources Act for fiscal years 1985, 1986 and 1987.

BACKGROUND AND NEEDS

NOAA was created in 1970 by Executive order, and vested with the primary responsibility for most of the Federal Government's civilian research, service and regulatory programs affecting the Nation's oceans and atmosphere. The work of NOAA is critical for efficient weather forecasting and the sound management and productive use of the Nation's ocean and coastal resources. Included among these programs are those administered by the National Weather Service, the National Ocean Service, the National Marine Fisheries Service and the Office of Sea Grant.

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The scope of NOAA's responsibilities has increased considerably in the 14 years since its creation. In the decade of the 1970's national concern for the environment and an awareness of ever-increasing demands on our oceanic and atmospheric resources were reflected by the enactment of a significant number of legislative initiatives aimed at enhancing environmental protection and promoting wise management of these resources.

This bill is part of a comprehensive legislative package to reauthorize NOAA programs and includes authorizations for: (1) Nonliving Marine Resource activities, (2) The Sea Grant College Program, (3) The Ocean Thermal Energy Conversion (OTEC) program, (4) The National Advisory Committee on Oceans and Atmosphere (NACOA), and (5) The Deep Seabed Hard Mineral Resources Act.

NONLIVING MARINE RESOURCES

NOAA's activities in nonliving marine resources include its research on polymetallic sulfides, involving the acquisition of basic data and information, and general survey work.

Polymetallic sulfides are of significant scientific interest both in their potential for aiding understanding of the process of coastal evolution, and in their economic potential. In 1978, a team of international scientists, using NOAA's manned diving submersible *Alvin,* explored several ocean floor sites and discovered massive metallic sulfide deposits on the sea floor. Their discovery generated research by scientists from the U.S. Geological Survey and the University of Washington on the Juan de Fuca Ridge off the coast of Oregon and Washington, and research by NOAA scientists on the Galapagos Ridge in the eastern tropical Pacific Ocean.

Polymetallic sulfide samples that have been collected from these hydrothermal vent areas contain high concentrations of zinc, iron, and copper, and trace percentages of manganese, molybdenum, lead, silver, vanadium, cobalt, gallium, cadmium, platinum, and gold. The utilization of polymetallic deposits may offer advantages over the mining of manganese nodules, since polymetallic sulfides are found in shallower depths and in dense concentrations.

NOAA has initiated programs to inform industry of the commercial potential of polymetallic sulfide deposits, and will continue to collect data on the Gorda and Juan de Fuca Ridges to determine if the deposits warrant commercial exploitation.

The Committee supports continued research on polymetallic sulfides.

SEA GRANT

The National Sea Grant College Program Act dates back to 1966 and is aimed at increasing the understanding, utilization, and conservation of the Nation's ocean and coastal resources. The program is designed to "achieve the gainful use of marine resources" through a partnership among Federal and State Governments, universities, and the private sector.

Much of the Sea Grant Program's effectiveness can be attributed to the conceptual framework within which the program operates—a partnership among State and Federal Governments, universities, and private industries. Collectively, the partnership arrangement

provides a comprehensive research and application effort that is focused on the development of marine resources through a national network of universities and institutions of higher learning. The national network orientation of the program is essential to providing education, research, and advisory services that embrace a broad array of marine scientific, engineering, and commercial activities.

The Sea Grant program operates by providing assistance through grants to promote a strong educational base, responsive research and training activities, and prompt, broad dissemination of knowledge and techniques.

The Sea Grant Program awards three different types of national grants, all of which require at least a one-third match from non-Federal sources.

In addition to these national grants, the International Cooperative Assistance Program was established by Congress in 1976. This program was aimed at promoting cooperation between U.S. academic institutions and their counterparts in developing countries. The primary goals of the program included: (1) the enhancement of research and development capabilities of developing countries in relation to their ocean and coastal resources; and (2) the exchange of information and technology transfer with any nation. In 1980, the Program was renamed the "Sea Grant International Program." At the same time, its goals were broadened to include all foreign nations, not just developing nations.

The International Program, like the National Program, is also funded on a matching basis with participating foreign academic institutions.

The Sea Grant network has grown over the years, and now consists of some 19 Sea Grant colleges plus an additional dozen other major programs. Since 1968, Sea Grant has trained about 7,000 students, primarily at the graduate level, and helped to sponsor a tremendous variety of research relating to the ocean sector of the economy. For example, the Pacific Sea Grant College Program in Alaska, Hawaii, California, Oregon, and Washington, in close coordination, are working to develop, use, and conserve the vast resources of the Pacific Ocean. Sea Grant research has helped to make computer technology a normal part of the operations of small ports and individual fishermen. In Washington, Sea Grant's pioneering work in underwater acoustics has not only created a new technology that is transforming fishery management, but in addition has created a new domestic industry; the manufacture of high precision acoustic instrumentation.

The Committee believes that the Sea Grant Program is cost-effective and vital. The Committee has consistently supported the continuation of Sea Grant despite administration proposals to terminate the program. Testimony received by the Committee strongly supports the international program of Sea Grant and the Committee intends that this program be adequately funded.

OCEAN THERMAL ENERGY CONVERSION

OTEC is the principal ocean technology currently being investigated as an alternative source of energy. The Ocean Thermal Energy Conversion Act of 1980 (Public Law 96–320) was enacted in

order to establish a regulatory framework for the development of U.S. OTEC enterprises.

Under the act, NOAA is directed to establish a legal regime and to provide for licensing of OTEC facilities. The licensing process specified by the act requires that NOAA implement a one-stop licensing process for all relevant Federal permits. The act also requires that NOAA submit to the Congress a 5-year plan for a program to assess environmental effects of OTEC facilities and plantships.

Pursuant to the act, NOAA has issued final regulations governing the issuance of commercial OTEC licenses and published technical guidance for license applicants. In addition, although not specifically required by the act, NOAA has issued an impact statement describing the potential environmental impacts of construction and operation of commercial OTEC plants in the United States.

NOAA's implementation of its responsibilities under the OTEC Act has been carried out in consultation with private industry, a large number of Federal and State agencies, and public interest groups. NOAA's final OTEC licensing regulations provide the option of a consolidated application review that includes regular working-level meetings to coordinate scheduling of agency proceedings, consolidation of public hearings, and informal consultations designed to avoid major differences in the permitting decisions made by the individual agencies. Representatives of State and local agencies whose permits will be required for the OTEC project are invited to participate.

The Committee believes that the act is important in providing a stable and predictable regulatory framework for ocean thermal energy conversion licensing and environmental research, from which private sector development of this alternate energy source can emerge.

THE NATIONAL ADVISORY COMMITTEE ON OCEANS AND ATMOSPHERE

The NACOA was established in 1971 to advise the President and the Congress on marine and atmospheric science and service programs. In 1975, the charter was amended to add responsibilities for national ocean policy and coastal zone management. NACOA's 18 members are appointed for 3-year terms by the President, and must have expertise in disciplines related to oceans and atmospheric policy.

NACOA's assessments and recommendations are provided in an annual report to the President and the Congress. In addition, NACOA's recommendations may be provided through special reports, position statements, and direct correspondence to senior officials in Federal agencies and departments and to individual members of Congress. The Committee's recommendations also are presented through testimony at Congressional hearings.

During 1983, NACOA produced three major reports, in addition to its Annual Report. These reports include "Marine Transportation in the United States: Constraints and Opportunities"; "U.S. Coast Guard: Status, Problems, and Potential"; and "The Nation's River and Flood Forecasting and Warning Service."

The administration proposed elimination of NACOA in fiscal year 1985.

The Committee supports continued funding of NACOA because of its importance as an independent advisor both to the executive and the Congress.

DEEP SEABED HARD MINERAL RESOURCES ACT

The Deep Seabed Hard Mineral Resources Act promotes the orderly and environmentally sound exploration for, and development of, manganese nodule deposits of the deep seabed.

The United States is dependent on foreign sources for many strategic metals, including cobalt, manganese, and nickel. Cobalt, which the United States imports primarily from Zaire and Zambia, is used for the high-temperature alloys necessary in the aerospace industry. Manganese, imported primarily from Australia, Brazil, and South Africa, is required in the steel industry. Nickel, used mainly in stainless steel and other high temperature steel alloys, is supplied by Australia and Canada. All of these strategic metals are contained in manganese nodules.

Manganese nodules were first discovered during the 1873–76 oceanographic voyage of the HMS *Challenger*, but remained scientific curiosities until their value as potential mineral resources was realized in the late 1950's. Main commercial interest currently is focused on an area in the east-central Pacific Ocean that contains a higher concentration of high-grade nodules than other surveyed areas.

Since dependence on foreign sources of metals can lead to uncertainties in supply, manganese nodules and their potential for insuring a stable supply of strategic minerals are of considerable interest.

There are several important components to the act for which NOAA is responsible:

(1) Development of regulations for licenses for exploration;
(2) Development of regulations for commercial recovery;
(3) Continuing environmental research; and
(4) Arrangements to encourage international cooperation.

The act authorizes the Administrator of NOAA to issue to eligible U.S. applicants licenses to explore for deep seabed hard minerals and permits to mine the minerals commercially. NOAA has taken major steps to meet its obligations under the act. In 1981, final regulations for exploration activities were issued, as well as an impact statement and technical guidance to assist applicants in the submission of environmental data.

In 1982, NOAA received applications from four mining consortia with U.S. company members. These applications were deemed complete, thus establishing consortia priorities of right, with the exception of certain unresolved issues pertaining to specific sites. In January 1984, NOAA received final amendments from the mining consortia which reflected resolution of those remaining conflicts. In April 1984, NOAA certified each of the four consortia for licensing, subject to the public participation procedures specified by the act. NOAA expects to issue a draft Environmental Impact Statements for each site by May 1984.

Following exploration and test mining activities under exploration licenses, the next stage in development of deep seabed mine sites involves issuance of commercial recovery permits. The act prohibits commercial recovery before January 1, 1988; however, to prepare for that time and to give U.S. companies the fullest picture of the legal framework under which they would operate, NOAA is currently developing commercial recovery regulations.

In addition to establishing a legal framework for deep seabed mining, the act also requires NOAA to accelerate environmental assessment of the effects of exploration and commercial recovery. NOAA has prepared a 5-year plan for fiscal years 1981–85.

In the international arena, the act authorizes NOAA, in consultation with the Secretary of State and the heads of other departments and agencies, to designate as "reciprocating states" those nations which establish seabed mining programs compatible with the U.S. program and that recognize U.S. licenses and permits.

NOAA has participated in discussions with other nations to develop arrangements for mutual recognition of seabed mining licenses. The United States, United Kingdom, Federal Republic of Germany, and France signed an agreement on criteria for pioneer explorer recognition and for resolving conflicts among pioneer applications. Representatives of these and other mining nations (Japan, Italy, Belgium, and the Netherlands) are continuing discussion of principles to govern the next generation of seabed mining agreements.

In addition to these activities, NOAA is exploring activities which may reduce uncertainties for the fledgling seabed mining industry, such as cooperation among licensees, and coordination of other relevant regulatory licenses and permits.

The Committee believes that the act plays an important role in promoting the orderly and environmentally-sound development of manganese nodule deposits of the deep seabed. The Committee believes that the act can help to reduce U.S. dependence on potentially unstable foreign supplies of strategic minerals.

Summary of Major Provisions

The National Oceanic and Atmospheric Administration Ocean and Coastal Program Authorization Act includes authorizations for five programs, for the fiscal years and in the amounts as shown:

(1) Nonliving Marine Resources, $2,500,000 for fiscal year 1985;

(2) Sea Grant, $42 million for fiscal year 1985;

(3) Ocean Thermal Energy Conversion (OTEC), $630,000 for fiscal year 1985;

(4) National Advisory Committee on Oceans and Atmosphere (NACOA), $630,000 for fiscal year 1985; and

(5) Deep Seabed Hard Mineral Resources Act, $1,500,000 for each of fiscal years 1985, 1986, 1987.

Estimated Costs

In accordance with paragraph 11(a) of rule XXVI of the Standing Rules of the Senate and section 403 of the Congressional Budget

Act of 1974, the Committee provides the following cost estimate, prepared by the Congressional Budget Office:

U.S. CONGRESS,
CONGRESSIONAL BUDGET OFFICE,
Washington, D.C., May 11, 1984.

Hon. BOB PACKWOOD,
Chairman, Committee on Commerce, Science and Transportation, U.S. Senate, Washington, D.C.

DEAR MR. CHAIRMAN: The Congressional Budget Office has prepared the attached cost estimate for S. 2538, the National Oceanic and Atmospheric Administration Ocean and Coastal Program Authorization Act.

If you wish further details on the estimate, we will be pleased to provide them.

Sincerely,

RUDOLPH G. PENNER,
Director.

CONGRESSIONAL BUDGET OFFICE COST ESTIMATE

1. Bill number: S. 2538.

2. Bill title: National Oceanic and Atmospheric Administration Ocean and Coastal Program Authorization Act.

3. Bill status: As ordered reported by the Senate Committee on Commerce, Science and Transportation, May 8, 1984.

4. Bill purpose: This bill authorizes appropriations of $47.26 million for fiscal year 1985 for the National Oceanic and Atmospheric Administration to administer ocean and coastal programs. These include the national sea grant college program, ocean thermal energy conversion activities, the National Advisory Committee on Oceans and Atmosphere, nonliving marine resources programs, and deep seabed hard minerals activities. In addition, the bill authorizes the appropriation of such additional sums as may be necessary for increases in salary, pay, and other employee benefits.

5. Estimated cost to the Federal Government:

[By fiscal years, in millions of dollars]

	1985	1986	1987	1988	1989
Authorization level:					
Specified (function 300)	47.3	1.5	1.5		
Estimated (function 920)	.1				
Total	47.4	1.5	1.5		
Estimated outlays					
Function 300	32.1	13.8	2.9	1.4	0.1
Function 920	.1	(1)			
Total	32.2	13.8	2.9	1.4	.1

[1] Less than $50,000.

BASIS OF ESTIMATE

Specified authorizations are as stated in the bill. Additional authorizations for pay are consistent with CBO's baseline projections. For purposes of this estimate, the full amounts authorized are assumed to be appropriated prior to the beginning of each fiscal year. Outlays are estimated based on historical spending patterns for these programs.

6. Estimated cost to State and local governments: None.
7. Estimate comparison: None.
8. Previous CBO estimate: None.
9. Estimate prepared by: Deb Reis.
10. Estimate approved by: James L. Blum, Assistant Director for Budget Analysis.

Regulatory Impact Statement

In accordance with paragraph 11(b) of rule XXVI of the Standing Rules of the Senate, the Committee provides the following evaluation of the regulatory impact of the legislation:

The bill, as reported, merely provides the vehicle to annually authorize appropriations, much of which have previously been funded pursuant to standing authorization and will result in no new regulatory burdens. The part of the nonliving marine resources subactivity that has previously been funded under standing authorization will now be funded pursuant to this act.

Section-by-Section Analysis

SECTION 1

Cites the title as the National Oceanic and Atmospheric Administration Ocean and Coastal Program Authorization Act.

SECTION 101

Authorizes appropriations of $2,500,000 for fiscal year 1985 for nonliving marine resource program activities, and clarifies that such funds are in addition to funds authorized pursuant to the Deep Seabed Hard Mineral Resources Act and the Ocean Thermal Energy Conversion Act.

This budget subactivity has, in the past, been partially carried out pursuant to standing authorization under "An Act to define the functions and duties of the Coast and Geodetic Survey, and for other purposes" (33 U.S.C. 883a et seq.). This authorization may also be used to cover duties relating to nonliving marine resources specified by any other existing statute.

SECTION 201

Authorizes appropriations of $42 million for fiscal year 1985 for the National Sea Grant College Program Act. In addition, $1 million of this overall amount is authorized for Sea Grant's international program.

SECTION 301

Authorizes appropriations of $630,000 for fiscal year 1985 for the Ocean Thermal Energy Conversion Act.

SECTION 401

Authorizes appropriations of $630,000 for fiscal year 1985 for the National Advisory Committee on Oceans and Atmosphere Act.

SECTION 501

Authorizes appropriations of $1,500,000 for each of fiscal years 1985, 1986 and 1987 for the Deep Seabed Hard Mineral Resources Act.

SECTION 601

Authorizes appropriations to cover such increases in salary, pay and employee benefits as may be authorized by law.

CHANGES IN EXISTING LAW

In compliance with paragraph 12 of rule XXVI of the Standing Rules of the Senate, changes in existing law made by the bill, as reported, are shown as follows (existing law proposed to be omitted is enclosed in black brackets, new material is printed in italic, existing law in which no change is proposed is shown in roman):

THE SEA GRANT PROGRAM IMPROVEMENT ACT OF 1976

SECTION 3 OF THAT ACT

SEC. 3. (a)—(b) * * * *

(c) There are authorized to be appropriated for purposes of carrying out this section not to exceed the following amounts:

(1)—(3) * * * *

(4) For fiscal year 1985, not to exceed $1,000,000 in such fiscal year appropriated pursuant to section 212 of the National Sea Grant College Program Act may be available to carry out this section.

Such sums as may be appropriated under this section shall remain available until expended.

THE DEEP SEABED HARD MINERAL RESOURCES ACT

SECTION 310 OF THAT ACT

SEC. 310. There are authorized to be appropriated to the Administrator, for purposes of carrying out the provisions of titles I and II and this title, such sums as may be necessary for the fiscal years ending September 30, 1981, and September 30, 1982, and $1,469,000 for the fiscal year ending September 30, 1983, [and] $2,150,000 for the fiscal year ending September 30, 1984, *and $1,500,000 for each of the fiscal years ending September 30, 1985, September 30, 1986, and September 30, 1987.*

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